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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,891	03/15/2004	Toshio Machara	Q80081	8355

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WASHINGTON, DC 20037

EXAMINER
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SAID, MANSOUR M

ART UNIT	PAPER NUMBER
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2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/05/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/799,891

Applicant(s)

MAEHARA, TOSHIO

Examiner

MANSOUR M. SAID

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 is/are allowed.
- 6) ☒ Claim(s) 5,6 and 8 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 3/15/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claimed limitations “said analog image signal, of said analog signal and a value corresponding to the least signal bit digit in said high-order bit pixel data in accordance with a value of low-order bi pixel data” is not clearly stated that how to obtain the high-order consecutive bits, and furthermore, in order to have the analog signal, the selector should select the high-order bit pixel. Appropriate correction is needed.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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**4. Claims 5-6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by (Kasahara, Koichi; (EP-045, 8169 A2; hereinafter referred to as Kasahara).**

**As to claim 5,** As best understood, Kasahara teaches an image signal processing device, which converts input pixel data corresponding to each of the pixels of a display panel into an analog image signal (figures 3-4 and column 5, lines 30-58), comprising: a D/A conversion portion for performing digital-to-analog conversion processing of high-order bit pixel data comprising high-order consecutive bits in said input pixel data to obtain an analog signal (figures 4 & 7-8, column 8, lines 1-58 and column 9, lines 1-19); and, a calculation portion for outputting an addition result, as said analog image signal, of said analog signal and a value corresponding to the least significant bit digit in said high-order bit pixel data in accordance with a value of low-order bit pixel data, said low-order bit pixel data being constituted by low-order consecutive bits of said input pixel data (figures 4 & 7-8, column 8, lines 1-58 and column 9, lines 1-19).

**As to claim 6,** as best understood, Kasahara teaches wherein said calculation portion outputs said addition result as said analog image signal during a time period corresponding to a value of said low-order bit pixel data in a prescribed unit period and outputs said analog signal as said analog image signal during other time period in said prescribed unit period (figures 4 & 7-8, column 8, lines 1-58 and column 9, lines 1-19).

**As to claim 8,** as best understood, Kasahara teaches wherein said low-order bit pixel data comprises low-order consecutive M bits including the least significant bit of said input pixel data comprising N bits (N is a natural number, and M is a natural number smaller than N), and said high-order bit pixel data comprises high-order consecutive (N-M) bits including the most

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significant bit of said input pixel data (figures 4 & 7-8, column 8, lines 1-58 and column 9, lines 1-19).

*Allowable Subject Matter*

**5. Claims 1-4 are allowed.**

The following is an examiner's statement of reasons for allowance: Claims 1-4 are allowed since certain key features of the claimed invention are not taught or fairly suggested by prior art. **In claim 1**, “a calculation portion for adding high-order bit pixel data to a value corresponding to the least significant bit digit in said high-order bit pixel data to obtain addition high-order bit pixel data, said high-order bit pixel data being constituted by high-order consecutive bits of said input pixel data; a selection portion for selecting either said addition high-order bit pixel data or said high-order bit pixel data in accordance with a value of low-order bit pixel data, said low-order bit pixel data being constituted by low-order consecutive bits of said input pixel data; and, a D/A conversion portion for performing digital-to-analog conversion of the selected pixel data to obtain said analog image signal”.

**6. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.**

The following is a statement of reasons for the indication of allowable subject matter:  
“wherein said low-order bit pixel data comprises low-order consecutive M bits (M is a natural number) of said input pixel data, and in image signal processing of each consecutive  $2^M$  frame's

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worth of said input pixel data, said calculation portion outputs said addition result as said analog image signal for frames corresponding in number to a value of said low-order bit pixel data, and outputs said analog signal as said analog image signal for the other frames”.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Anderson et al. (5,790,705) teach a compression technique for substantially lossless digital image data storage.

Huang et al. (5,870,049) teach a current mode digital to analog converter.

Wen (6,198,419) teaches a DAC system.

Tanaka et al. (6,700,559) teaches an eight bit digital image data.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mansour M. Said whose telephone number is 571-272-7679. The examiner can normally be reached on Monday through Thursday from 8:30-6:00 P.M. The examiner can also be reached on alternate Friday from 8:30 a.m. to 5:00 p.m. EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe whose telephone number is 571-272-7681.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: 571-273-8300 (for Technology Center 2600 only)

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mansour M. Said

12/28/06



**RICHARD HJERPE**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**